

REMARKS

This application has been reviewed in light of the Office Action dated December 5, 2003. Claims 23-29 are pending in this application. Claims 23, 25, and 28 have been amended to define still more clearly what Applicants regard as their invention, in terms that distinguish over the art of record. Claims 23, 25, and 28 are in independent form. Favorable reconsideration is requested.

The Office Action rejected Claims 23 and 25 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,322,752 (Bixby); rejected Claims 24 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Bixby in view of U.S. Patent No. 5,196,939 (Elabd et al.); rejected Claim 27 under 35 U.S.C. § 103(a) as being unpatentable over Bixby in view of U.S. Patent No. 6,014,467 (Asano); rejected Claim 23 under 35 U.S.C. § 103(a) as being unpatentable over Bixby in view of U.S. Patent No. 4,816,910 (Hashimoto et al.); and rejected Claim 29 as being unpatentable over Bixby in view of U.S. Patent No. 4,816,910 (Hashimoto et al.) and in further view of U.S. Patent No. 5,771,031 (Kinoshita et al.). Applicants respectfully traverse these rejections.

Applicants submit that amended independent Claims 23, 25, and 28, together with the remaining, dependent claims, are patentably distinct from the cited prior art at least for the following reasons.

The aspect of the present invention set forth in Claim 23 is an image pickup element formed on a single semiconductor chip that includes a pixel area including an arrangement of a plurality of blocks, each block including at least two photo-detection elements. The image pickup element also includes a plurality of output lines which output, in parallel at the same time, signals of all of the photo-detection elements included in the block, and an operation section which inputs, in parallel, the signals outputted in parallel

from the plurality of output lines, where the operation section performs an interpolation processing to interpolate a predetermined signal using signals other than the predetermined signal.

Among the notable features of Claim 23 is that the image pickup element has a pixel area which includes at least two pixels, and is arranged so as to output, in parallel at the same time, signals of all of the pixels included in the block.

Bixby, as understood by Applicants, relates to a fast frame rate sensor readout. The Office Action at page 3 states that “[i]n order to overcome the Bixby reference Applicant must claim that all of the pixels of a block are output in parallel at the same time.” Applicants submit that Claim 23 has been amended to include the Examiner’s proposed changes to Claim 23 and therefore, Applicants submit that at least for this reason, Claim 23 is patentable over Bixby.

Independent Claims 25 and 28 include the same feature of a pixel area which includes at least two pixels, and is arranged so as to output, in parallel at the same time, signals of all of the pixels included in the block, as discussed above in connection with Claim 23. Accordingly, Claims 25 and 28 are believed to be patentable for at least the same reasons as discussed above in connection with Claim 23.

A review of the other art of record, including Elabd, Asano, Hashimoto et al., and Kinoshita et al., has failed to reveal anything that, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as applied against the independent claims herein. Therefore, those claims are respectfully submitted to be patentable over the art of record.

The other claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and the allowance of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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